

Capability Maturity Model Integration (CMMI) & EIA Standard 859



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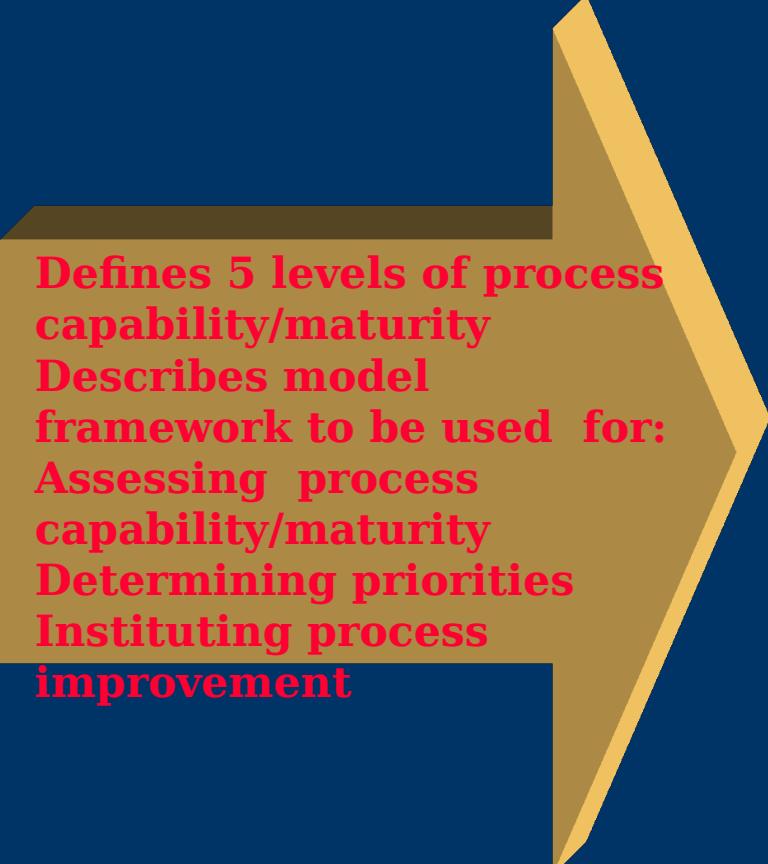
NDIA TID Technical Information Division Symposium
Royal Sonesta Hotel, New Orleans, LA

August 2003

Agenda

- **What is CMMI?**
- **What is required to achieve CMMI?**
- **Relating CMMI and EIA 859!**

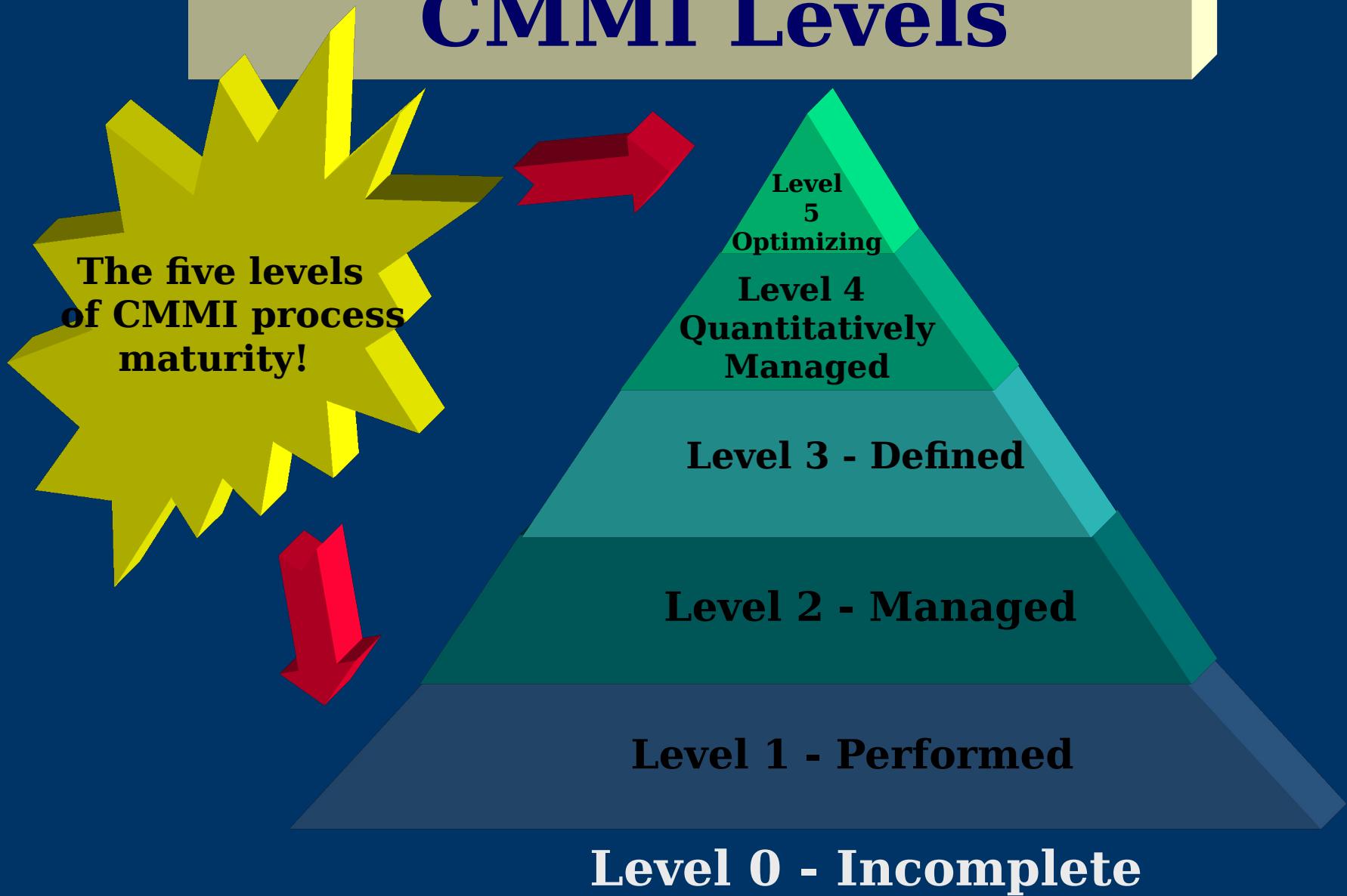
What is CMMI?



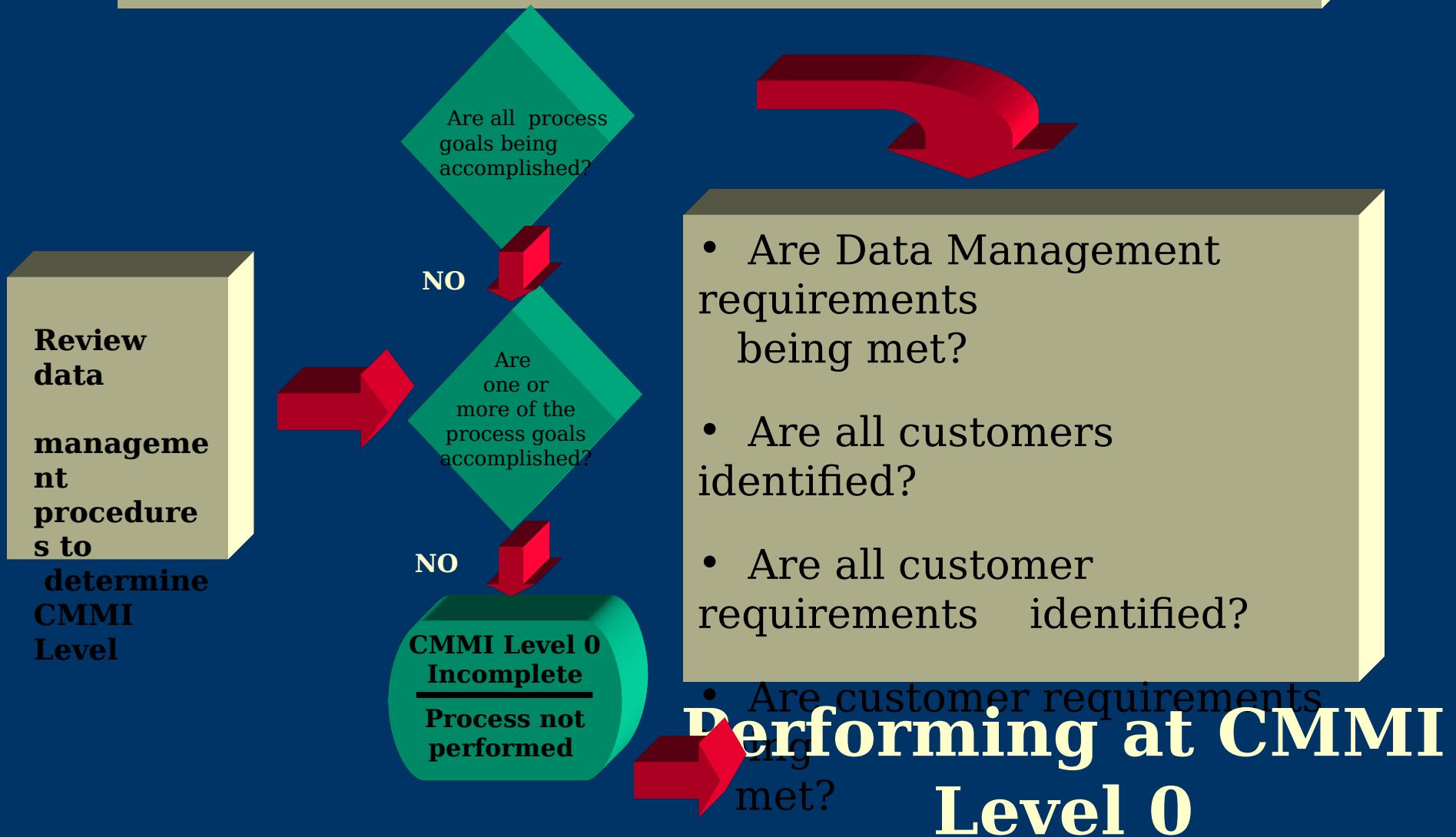
Defines 5 levels of process capability/maturity
Describes model framework to be used for:
Assessing process capability/maturity
Determining priorities
Instituting process improvement

Capability Maturity Model Integration
CMMI

CMMI Levels



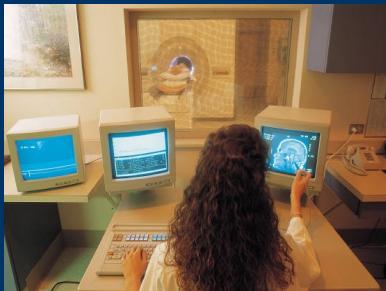
At what CMMI Level are we performing?



How do we achieve Level 1?



Identify your customer needs
Identify customers needs
Identify management process goals



Develop steps to produce the desired work products

Identify work products

What is CMMI Level 1?



Level 1 - Performed



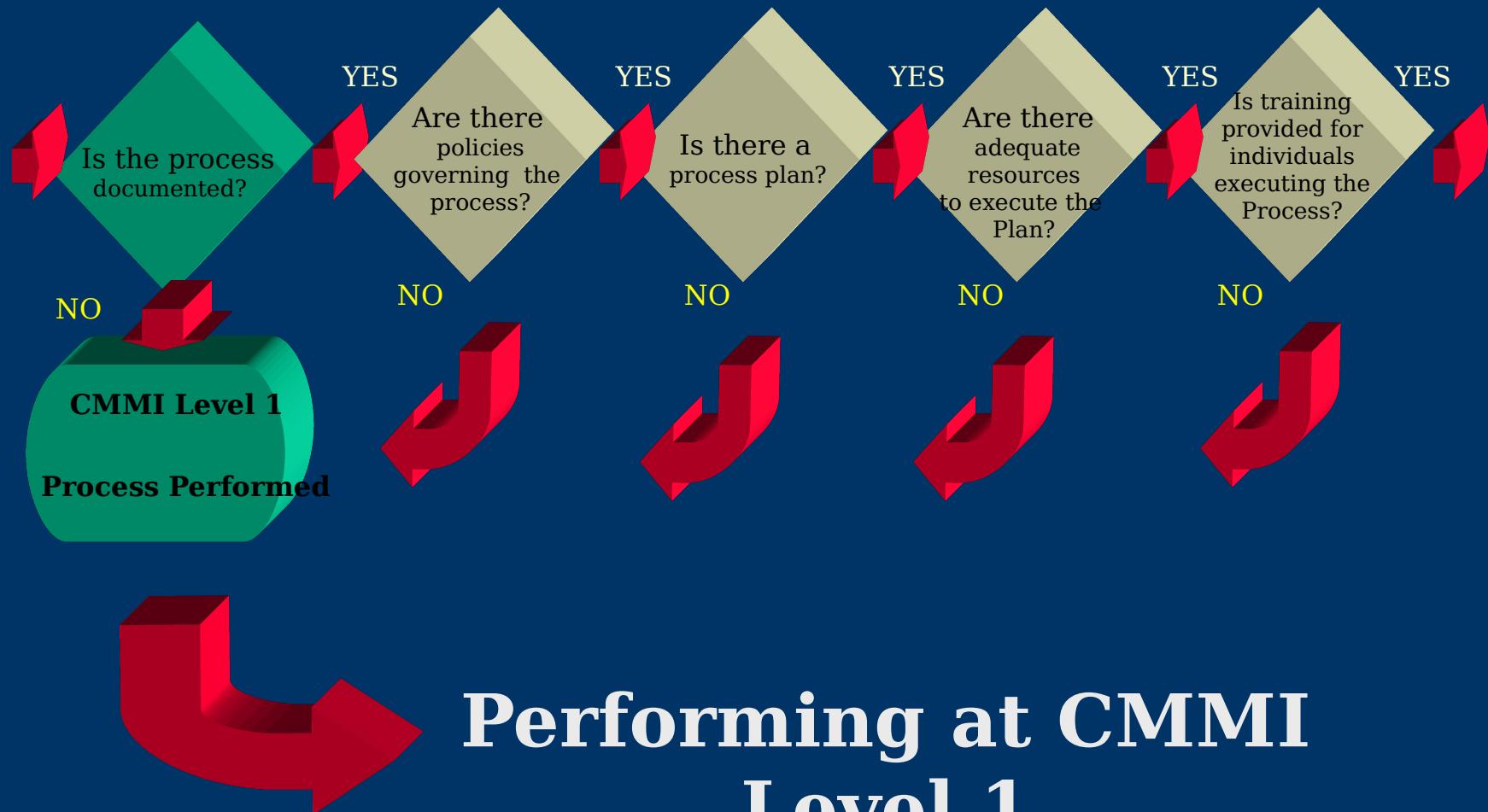
- **Specific goals are being accomplished**
- **No defined processes**
- **Individuals may follow differing procedures**
- **Using general purpose tools**

CMMI Level 1

Characteristics

- Dependent on individuals
- Results vary
- Resources vary
- Results unpredictable
- Practices are informal
- Quality inconsistent

Determining the CMMI Level



EIA 859

Includes 9 high level
Data
Management
Principles

Principles address
functions
of Data
Management

Describes
fundamental
concepts to be
considered
when structuring a
Data
Management
process

EIA Standard 859
Industry Standard
for
Data Management

DRAFT

EIA 859

Principles

EIA Standard 859
Industry Standard
for
Data Management
DRAFT



Principles

1. Define the organizationally-relevant scope of Data Management
2. Plan for, acquire, and provide data responsive to customer requirements
3. Develop DM processes to fit the context and business environment in which they will be performed.
4. Identify data products and views so their requirements and attributes can be controlled.
5. Control data repositories, data products, data views, and meta data using approved change control process.
6. Establish and maintain an

CMMI & EIA 859

CMMI



EIA 859

Principles

1. Define the organizationally-relevant scope of Data Management
2. Plan for, acquire, and provide data responsive to customer requirements
3. Develop DM processes to fit the context and business environment in which they will be performed.
4. Identify data products and views so their requirements and attributes can be controlled.
5. Control data repositories, data products, data views, and meta data using approved change control process.
6. Establish and maintain an identification process for intellectual property, proprietary, and competition-sensitive data.
7. Retain data commensurate with value.
8. Continuously improve data management.
9. Effectively integrate data management and knowledge management.

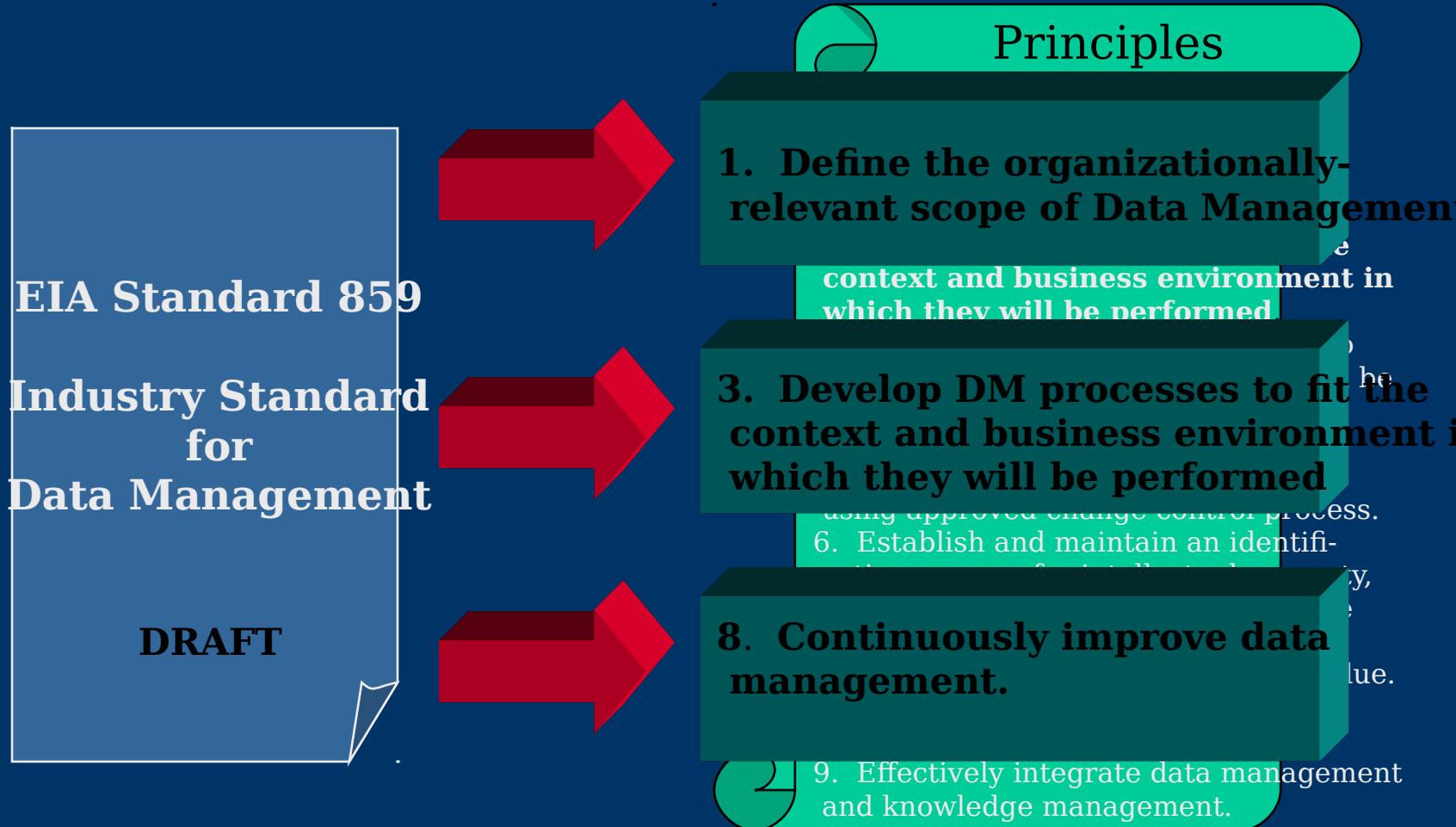
**Advocates Repeatable
Processes**

**Project Level
&**

Enterprise Level



Relating CMMI & EIA 859

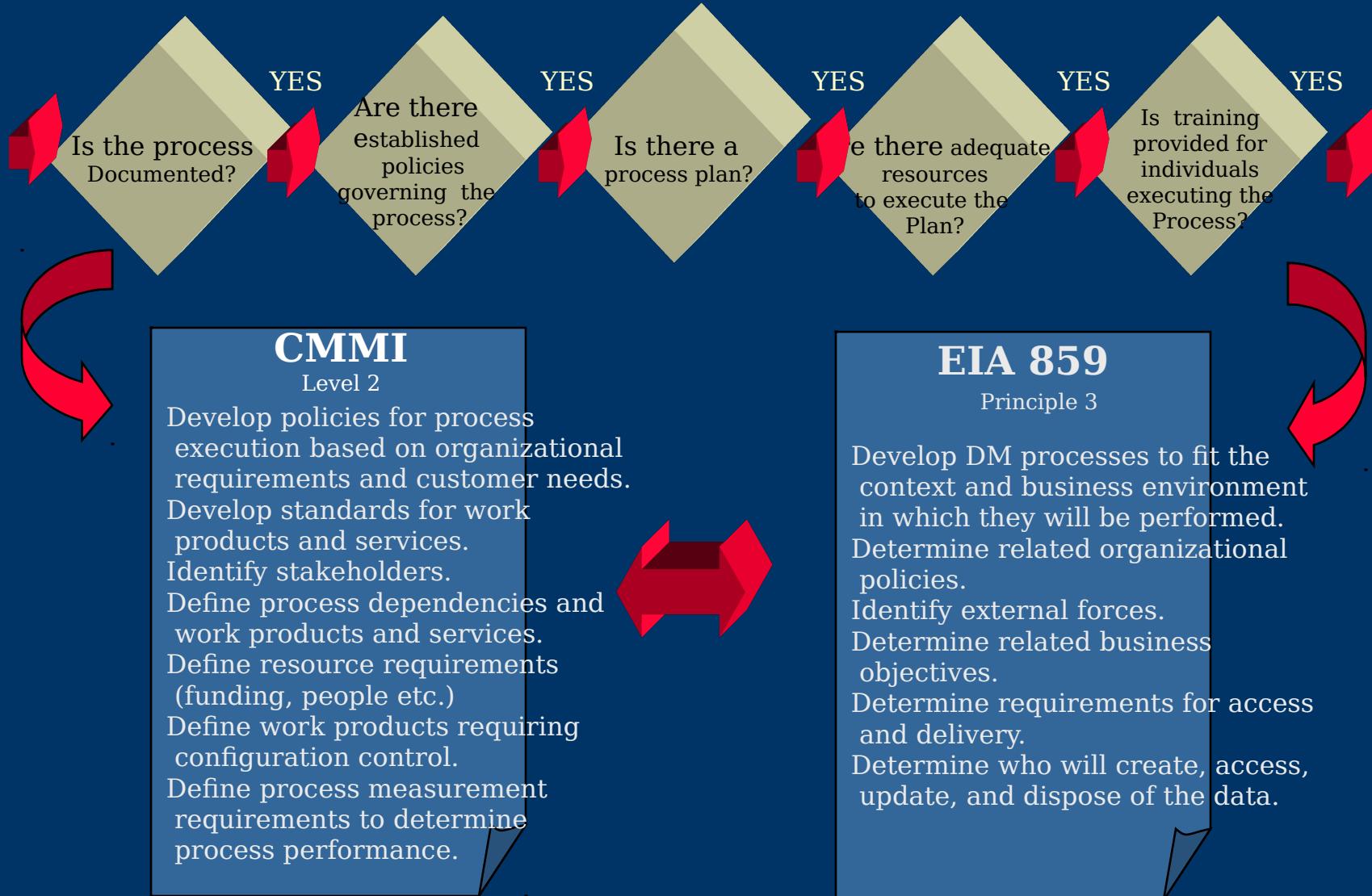


CMMI Level 2

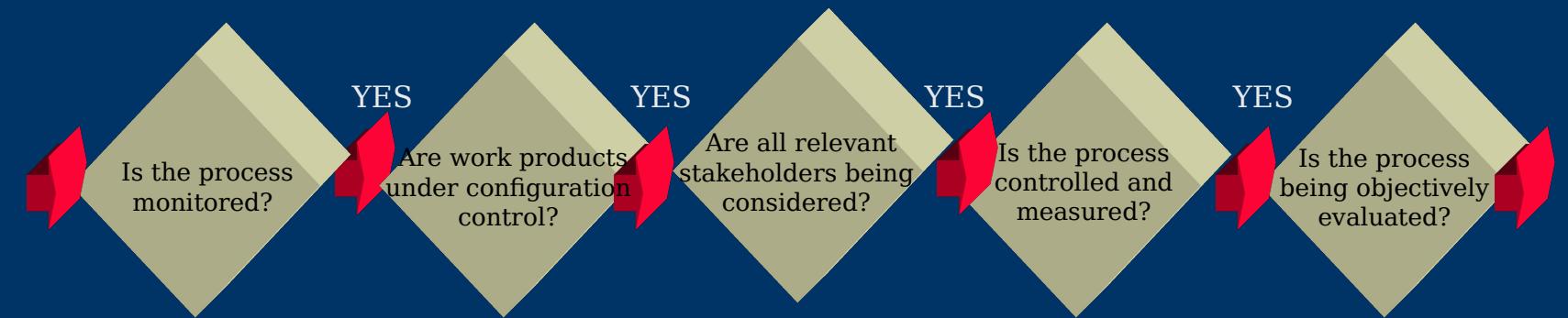


- **Planned and executed IAW policy/procedures**
- **Established objectives**
- **Adequate resources**
- **Applicable to a particular group/project**

Relating CMMI Level 2 & EIA 859



Relating CMMI Level 2 & EIA 859



CMMI

Level 2

Evaluate the effect of deviations from the process plans and descriptions.
Review accomplishments against process plans and descriptions.
Place the process work products under configuration management.
Coordinate the process plan and description with relevant stakeholders.
Monitor and control the process.
Assign responsibility and authority for performing the process.
Obtain the necessary resources.

EIA 859

Principle 3

Make needed adjustments in processes, practices, policy, organizational alignment and infrastructure.

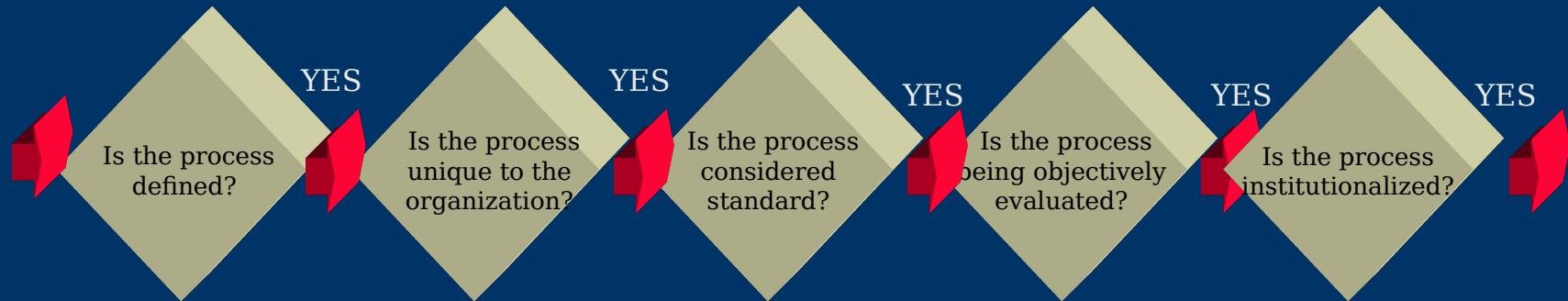
Control the integrity of data, data elements, data structures and data views.
Establish a change control process that imposes the appropriate level of review and approval.
Establish mechanisms for tracking and determining status of data.

CMMI Level 3



- Process institutionalized
- Process consistent across the organization
- Process measurable

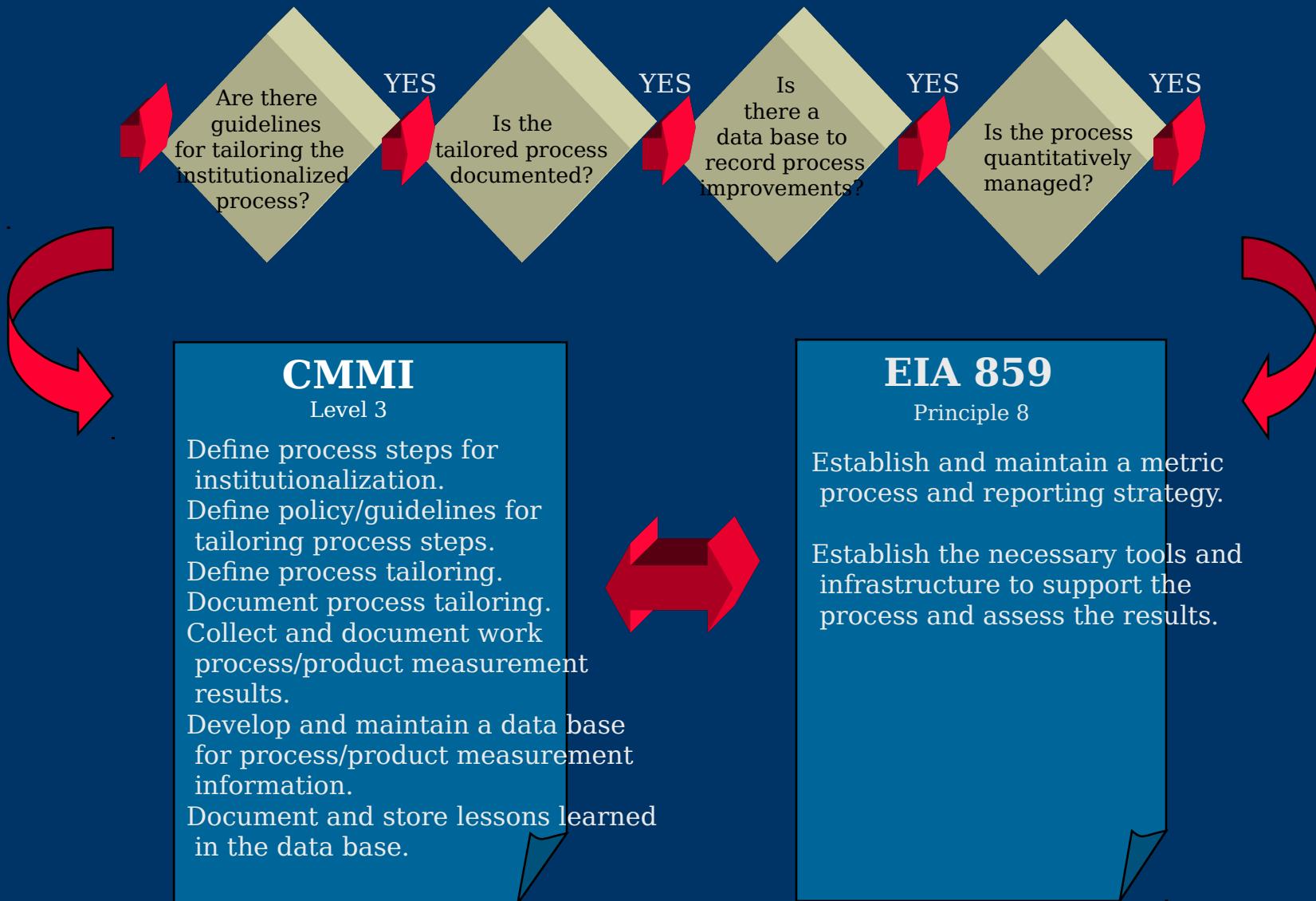
Relating CMMI Level 3 & EIA 859



CMMI Level 3

Define process steps for institutionalization.
Define policy/guidelines for tailoring process steps.
Define process tailoring.
Document process tailoring.
Collect and document work process/product measurement results.
Develop and maintain a data base for process/product measurement information.
Document and store lessons learned in the data base.

Relating CMMI Level 3 & EIA 859

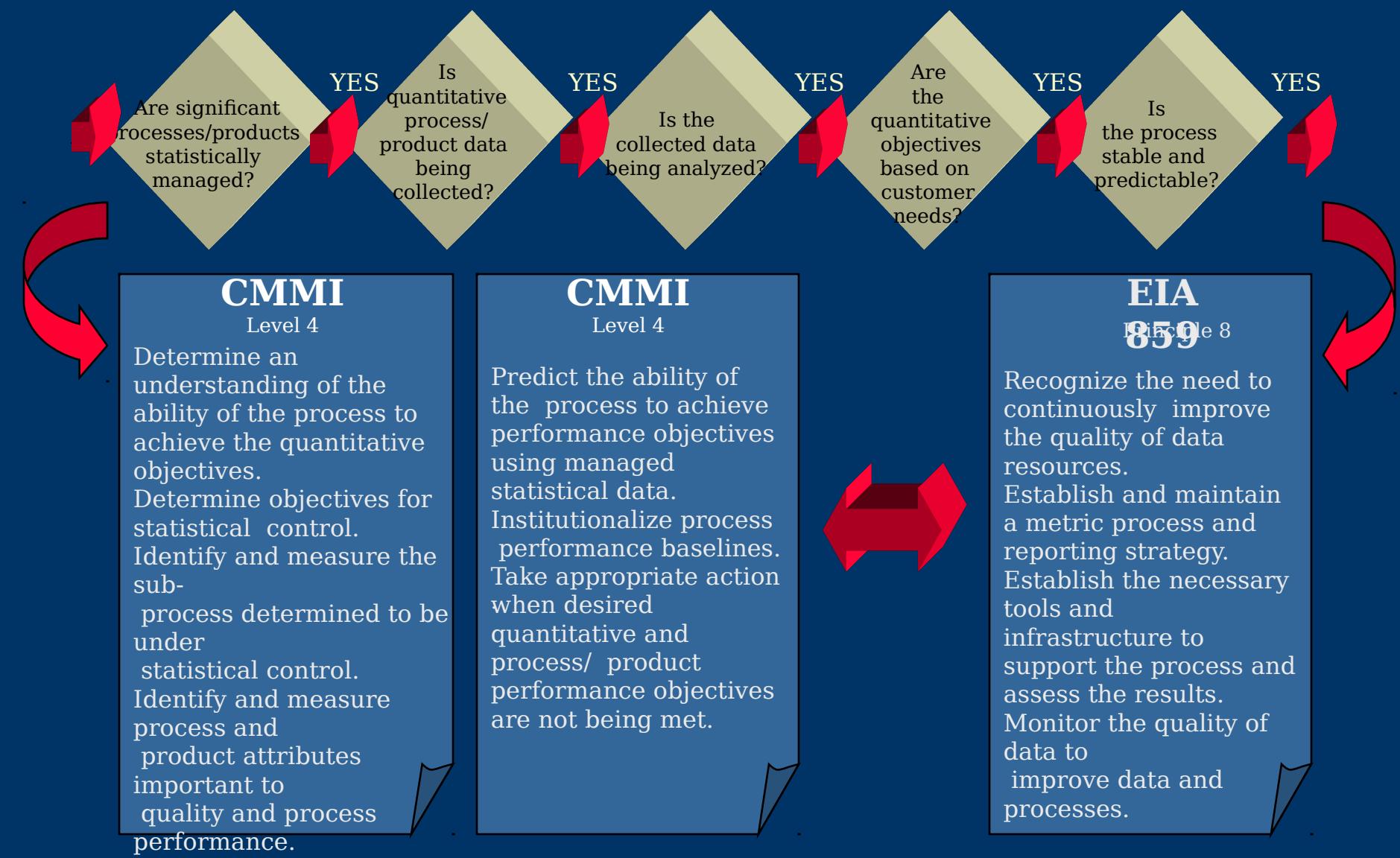


CMMI Level 4

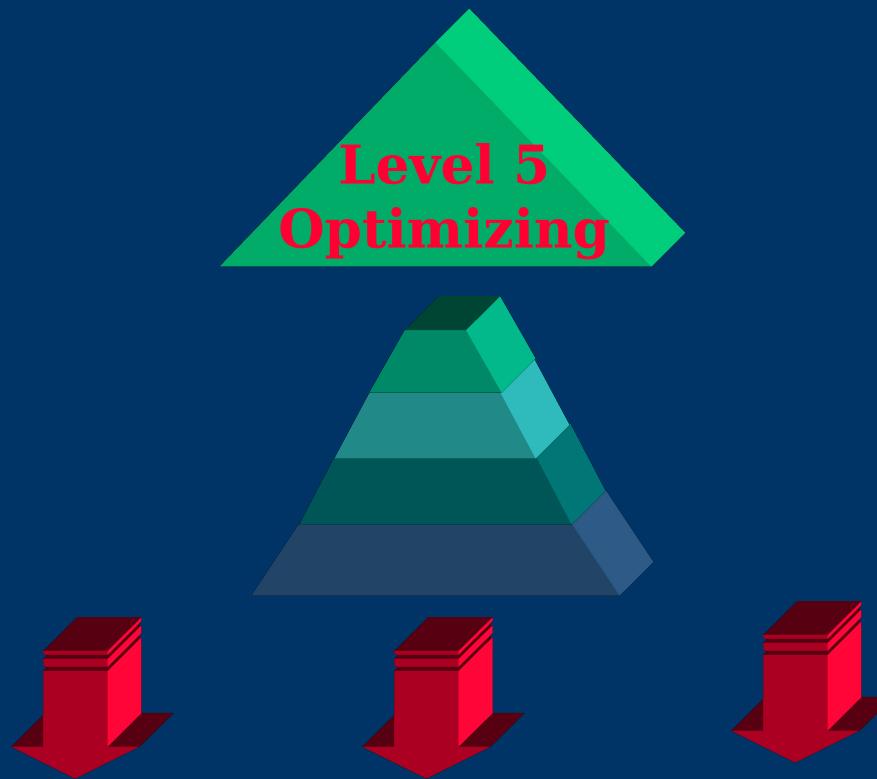


- Controlled using statistical and other techniques
- Process variation identified

Relating CMMI Level 4 & EIA 859

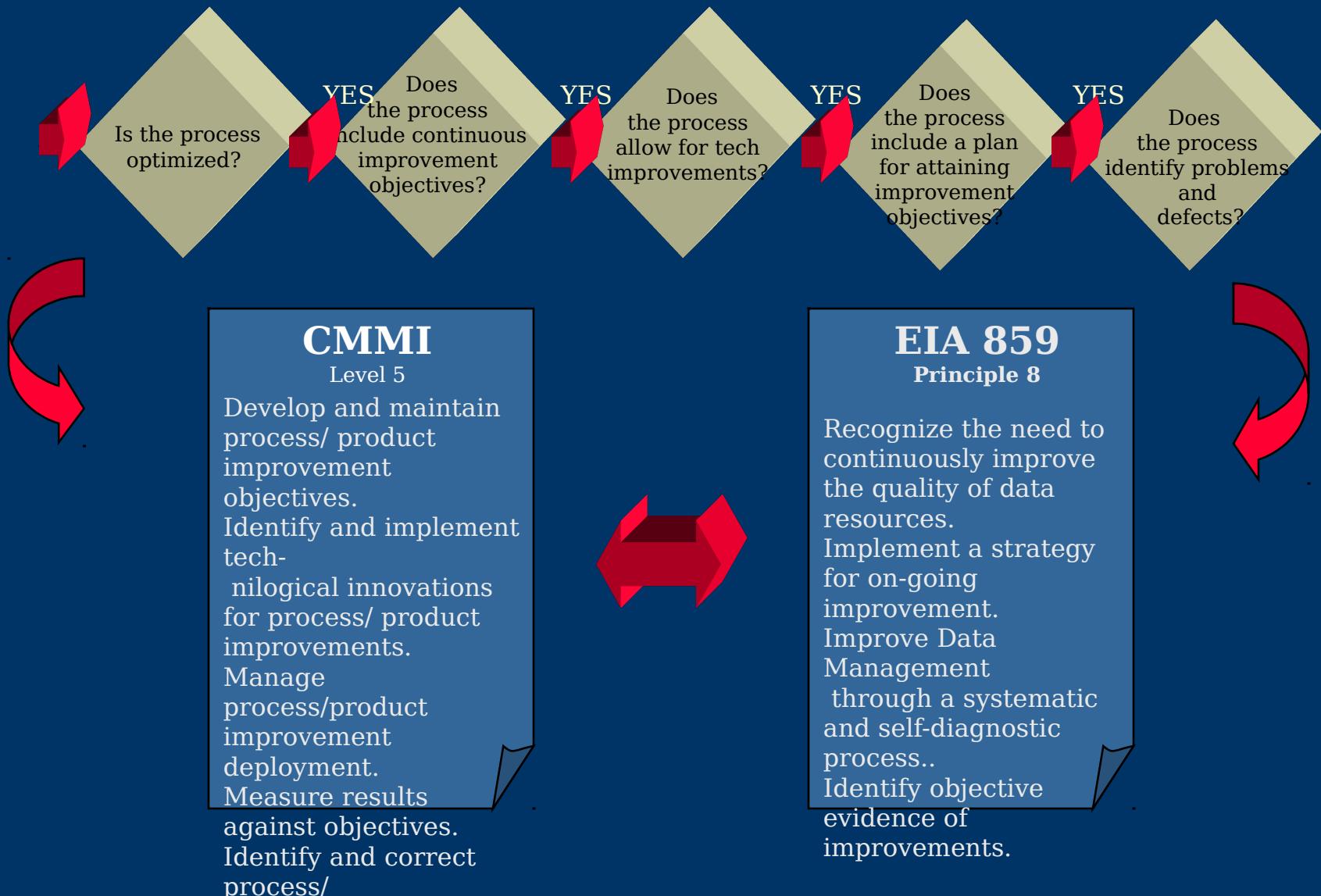


CMMI Level 5

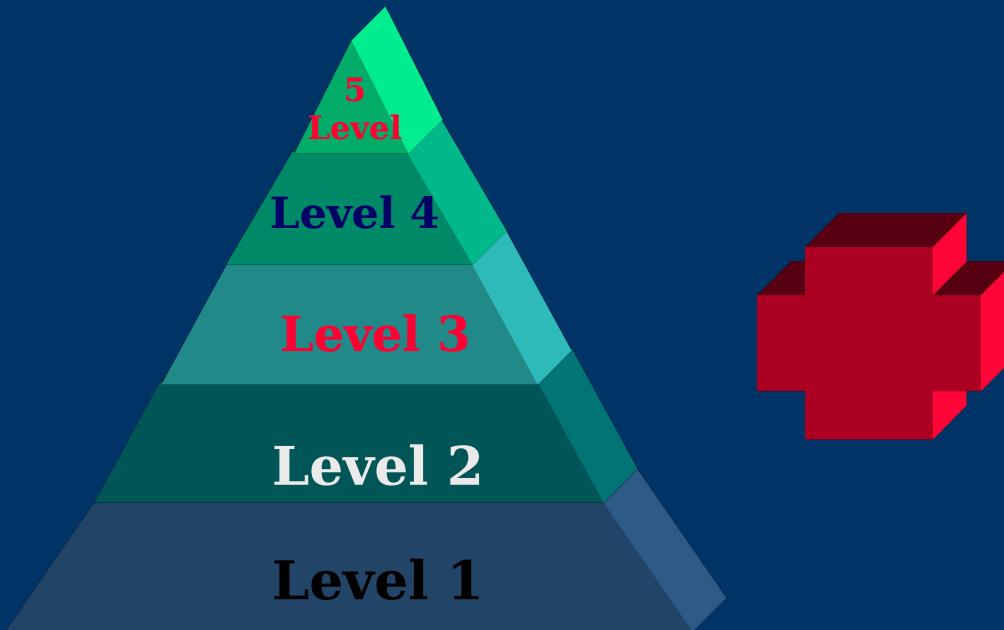


- Continuously improving performance
- Incremental improvement
- Technological improvement

Relating CMMI Level 5 & EIA 859



Summary



CMMI

Data Management

Summary

- CMMI is the measurement of organizational capability
- CMMI can be utilized for Data Management process development/improvement!
- CMMI concepts are being included in EIA 859!
- ??????????